

IN THE CLAIMS:

1. **(Currently amended)** A method for local measurement of an icing factor for atmospheric air containing supercooled water, the method comprising the following process steps:

providing at least one surface element ~~[[(3)]]~~ that is made of a material suitable for ice in atmospheric air to freeze on, said element having a predetermined surface area;

bringing the surface element(s) to a temperature that corresponds essentially to the temperature of the atmospheric air;

~~subsequently creating a relative movement at a predetermined velocity between the atmospheric air and the surface element(s) by allowing the moving said at least one surface element(s) to move element~~ through the atmospheric air~~[[,]]~~ at a predetermined velocity ~~[[and]]~~ for a predetermined period of time to enable ice to freeze thereon; and

subsequently measuring ~~[[the]]~~ a thickness or mass of ~~[[the]]~~ ice frozen fast to ~~[[the]]~~ said at least one surface element(s) element by means of a measurement device configured therefore after said predetermined period of time.

2. **(Currently amended)** A method according to claim 1, wherein the ice frozen fast is, following measurement ~~[[its]]~~ of said mass or thickness thereof, removed from the at least one surface {element(s)} element, whereupon a renewed measurement process can be performed..

3. **(Currently amended)** A method according to claim 2, wherein the ice frozen fast is removed by heating of ~~[[the]]~~ said at least one surface element~~(s)~~ element.

4. **(Currently amended)** A method according to claim 1, wherein a cover is provided that in a first position extends at least across ~~[[the]]~~ said at least one surface element~~(s)~~ element, and covers and shields the at least one surface element~~(s)~~ element; and said cover being removed from the at least one surface element~~(s)~~ element at least for the predetermined period of time during which the at least one surface element~~(s)~~ element ~~is/are~~ is moved through the atmospheric air at a predetermined rate.

5. **(Currently amended)** A method according to claim 4, wherein the at least one surface element~~(s)~~ element ~~is/are~~ is caused to move for a predetermined period of time after the cover has reverted to its first position following a measurement procedure, whereupon the thickness or mass of the ice frozen fast on the at least one surface element~~(s)~~ element is measured.

6. **(Currently amended)** A method according to claim 1, wherein the at least one surface element~~(s)~~ element ~~is~~ caused to move through the atmospheric air at a velocity that ensures that atmospheric precipitation not frozen fast ~~onto the surface element(s)~~ thereon is substantially thrown off ~~the surface element(s)~~.

7. **(Currently amended)** A method according to claim 1, wherein at least two surface elements are used that are rotatably arranged on a rotor shaft; and ~~that the movement of~~ wherein the rotor shaft is rotated

to move the two surface elements ~~is accomplished by a rotation of the rotor shaft~~ through the ambient air.

8. **(Currently amended)** An apparatus for local measurement of icing factor for atmospheric air containing supercooled water, wherein the apparatus comprises at least ~~[[a]]~~ one surface element ~~[[(3)]]~~ made of a material suitable for ice in atmospheric air to freeze on, wherein the at least one surface element~~(s)~~ has/have element has a predetermined surface area, and wherein the apparatus further comprises means ~~[[(4)]]~~ configured for moving the at least one surface element~~(s)~~ element through the atmospheric air at a predetermined rate and for a predetermined period of time, and wherein further means ~~[[(5)]]~~ are provided for measuring the thickness or mass of the ice frozen fast onto the at least one surface element~~(s)~~ element after the predetermined period of time, during which the at least one surface element~~(s)~~ has/have element has been moved through the atmospheric air.

9. **(Currently amended)** An apparatus according to claim 8, comprising a weighing device ~~[[(5)]]~~ configured for weighing and recording at least the weight of the at least one surface element~~(s)~~ element before and after the at least one surface element~~(s)~~ element has moved through the atmospheric air.

10. **(Currently amended)** An apparatus according to claim 9, comprising means for heating the at least one surface element~~(s)~~ element.

11. **(Currently amended)** An apparatus according to claim 10, wherein the apparatus comprises a rotor element with a rotor shaft

[[2]], and at least two surface elements [[3]] that extend from the rotor shaft and protrude ~~there from~~ therefrom, and wherein means [[4]] are provided for rotating the rotor ~~about its~~ about an axis thereof.

12. **(Currently amended)** An apparatus according to claim 11, wherein the apparatus comprises a cover [[6]] whose inside faces towards the at least one surface element(s) element and which is configured for occupying a first position in which it extends across the at least one surface element(s) element that ~~[[is/are]]~~ is hereby covered upwardly, and a second position in which the cover is removed ~~and does not cover the surface element(s)~~.

13. **(Currently amended)** An apparatus according to claim 12, wherein the cover is configured such that it forms, in ~~its~~ said first position, a closed space [[7]] around the at least one surface element(s) element.

14. **(Currently amended)** An apparatus according to claim 13, wherein means [[8,9]] are provided for heating the closed space underneath the cover.

15. **(Currently amended)** An apparatus according to claim 14, wherein the apparatus ~~is configured for moving~~ moves the at least one surface element(s) element for a predetermined period of time after the cover [[6]] has, following a measurement procedure, reverted to its first position, whereupon the thickness or mass of ice frozen fast can be determined.

16. **(Previously presented)** An apparatus according to claim 15, wherein the cover is, in ~~its~~ said second position, positioned such that its

inside is substantially protected against atmospheric precipitation and consequently remains dry.

17. **(Currently amended)** An apparatus according to claim 15, wherein the each of the at least one surface element(s) element consists of a plate having a front ~~[[(13)]]~~ and a back ~~[[(14)]]~~ oriented opposite thereto, and wherein the plate is configured ~~in such a manner~~ that the front of the plate faces in the direction in which the respective surface element is moved through the atmospheric air, and wherein – through the plate – a plurality of passageways ~~[[(1)]]~~ extend from the front of the plate to ~~it's the back thereof~~ thereof such that the atmospheric air is allowed to flow through the passageways from the front of the plate to the back of the plate.

18. **(Currently amended)** An apparatus according to claim 17, ~~wherein the apparatus comprises~~ including a system of surface elements ~~(21, 22, 23, 24)~~ mounted on a rotatable shaft ~~[[(2)]]~~ configured for being positioned in an essentially vertical position; and wherein the individual surface elements are configured and arranged such that the individual surface elements, ~~corresponding to their projection on a face perpendicular to the rotatable shaft, abuts on or overlaps~~ abut or overlap other surface elements seen in the direction of said shaft, whereby ~~it is accomplished that there is no space remains~~ between the individual surface elements when the apparatus is viewed from above, and thus that all atmospheric precipitation falling within the expanse of the apparatus, when the rotatable shaft is positioned vertically, essentially hits the surface elements and is thus able to settle in the form of ice.

20. **(Currently amended)** An apparatus according to claim 19, wherein the surface elements ~~are configured with~~ include passageways; and ~~that~~ the apparatus comprises means such that air can be conveyed through the passageways.

21. **(Previously presented)** An apparatus according to claim 20, wherein the apparatus comprises means for providing air in the form of either heated air or air essentially with at ambient temperature.

22. **(Currently amended)** An apparatus according to claim 21, ~~wherein the apparatus is arranged at ground level in an airport; and that the apparatus comprises~~ including means for recording the measurement results for the thickness or mass of the ice deposited on the surface element(s), and means for visually or auditively emitting a signal to ~~[[the]]~~ monitoring personnel about related to the measurement ~~result~~ results.